THE HONORABLE THOMAS S. ZILLY

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

BUNGIE, INC., Plaintiff, v. AIMJUNKIES.COM; PHOENIX DIGITAL GROUP LLC; DAVID SCHAEFER; JORDAN GREEN; JEFFREY CONWAY; and JAMES MAY, Defendants.	No. 2:21-cv-811-TSZ DECLARATION OF WILLIAM C. RAVA IN SUPPORT OF BUNGIE, INC.'S OPPOSITION TO DEFENDANTS' MOTION TO SUBSTITUTE EXPERT WITNESS EXHIBIT B FILED UNDER SEAL

I, William C. Rava, declare as follows:

1. I am an attorney licensed to practice law before the courts of the State of Washington. I am a Partner at Perkins Coie LLP, and counsel in this action for Plaintiff Bungie, Inc. ("Bungie" or "Plaintiff"). I submit this declaration in support of Bungie, Inc.'s Opposition to Defendants' Motion to Substitute Expert Witness. I have personal knowledge of the facts stated herein and, if called upon, could and would testify competently thereto under oath.

2. Attached hereto as **Exhibit A** is a true and correct copy of Mr. Kraemer's resume, provided by Defendants on June 19, 2023.

3. Attached hereto as **Exhibit B** is a true and correct copy of an excerpt of the transcript from the June 23, 2023 deposition of Mr. Kraemer.

Perkins Coie LLP
1201 Third Avenue, Suite 4900
Seattle, WA 98101-3099
Phone: 206.359.8000
Fax: 206.359.9000

4. Attached hereto as **Exhibit C** is a true and correct copy of signal chats produced by Mr. Kraemer in response to Bungie's May 31, 2023 subpoena to Mr. Kraemer.

5. Attached hereto as **Exhibit D** is a true and correct copy of the expert report of Mr. Kraemer, dated June 12, 2023 and provided by Defendants.

6. I am intimately familiar with the invoices that Perkins Coie issues in this case, as well as all the work reflected on those invoices. In June 2023, me and others working on this case, including experienced associates and paralegals, devoted many hours to investigating, researching, and considering responses to Defendants' proffer of Mr. Kraemer as an expert and Mr. Kraemer's expert report. Among the projects undertaken in connection with Mr. Kraemer's expert testimony, I deposed Mr. Kraemer for a full day on June 23, 2023. I spent many hours preparing for that deposition, including reviewing Mr. Kraemer's report, reviewing the documents cited in his report, reviewing other related documents produced by the parties in discovery, reviewing other relevant discovery in the case, reviewing case law on expert designations and reports, and discussing these and related expert issues with my colleagues, with Bungie's legal and technical teams, and with a consulting expert. I developed a deposition outline, selected and organized potential deposition exhibits, and reviewed my proposed approach with my colleagues and with Bungie. Although this effort cost well in excess of the $25,000 we now seek to require Defendants to post as a bond in the event the Court permits the expert substitution, the proposed $25,000 bond will at least begin to pay for (and provide some assurance of at least partial payment of) what we expect will be a similar effort required to address Mr. LaPorte.

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Seattle, WA 98101-3099
Phone: 206.359.8000
Fax: 206.359.9000

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed this 19th day of July, 2023.

/s/William C. Rava
William C. Rava

Perkins Coie LLP
1201 Third Avenue, Suite 4900
Seattle, WA 98101-3099
Phone: 206.359.8000
Fax: 206.359.9000

EXHIBIT A

Scott Kraemer

9793 W. Hedge Hog PL, Peoria AZ 85383

scott@scottkraemer.com

623-236-6555

linkedin.com/in/scott-kraemer-b734971

Summary

Over 20 Years of well rounded experience in the IT industry concentrating primarily on Fortune 100 & 500 application environments. Always considered the "go to" guy in crisis situations and if something needs to get resolved/recovered on mission critical Applications. Exceptional Problem solving skills. Specialize in the design, implementation and support of intricate, productivity enhancing, revenue generating applications into a highly secure, dynamic, DMZ environment.

Specialties: Enterprise Network Architecture, Application Design, Application Recovery, Security, Application deployment, IBM WebSphere 4,5,6,7, 8.5 (Liberty), Oracle App Server, JBOSS EAP 4-7.4, Tomcat, All Apache and custom rewrite rules, BEA WebLogic, IIS 6-10, ASP, ASP.NET, ODBC, JDBC, SQL, Oracle 11/12g, Red Hat Linux, Microsoft Visual C++ programming specializing in DLL compilation, .NET Programming, Java Programming, IDA Hex-Rays, Wireshark packet Monitoring, VMware / VRealize Operations Manager / ESXI, JIRA, BitBucket, Artifactory (Automation), Citrix ADC Server

Daily Tasks:

RedHat EAP JBOSS installation and Maintenance
Apache Install and Virtual Host Administration - Apache Reverse Proxy Configurations and Citrix ADC LB solutions with reverse proxy.
SSL Certificate Administration (Create, Order, Install all certificate formats)
RedHat Linux Administration
Windows Server Administration
Server and Application Recovery
Service Now / Remedy Ticket Resolution
Automation Scripting with Perl, Bash, Python

Current Courses Taken:

RedHat JBOSS Application Administration I (JB248) Oct 13, 2014
RedHat JBOSS Application Administration II (JB348) Dec 14, 2015
RedHat System Administration I (RH124) Oct 3, 2016

Experience

Sr Administrator

Honeywell

Aug 2020 - Present (2 years 11 months)
Key Focus is on Web Hosting Duties
RedHat JBOSS EAP 4.3 -7.3 - Install and Configure
IBM WebSphere - Install and Configure
Apache Server - Setup and Maintain Apache and Virtual Hosts
VMware Administrator

DCN Support - Ticket resolution (P1/P2) Application Recovery
Scripting and Automation

Web Hosting Integration Engineer
Capgemini
May 2013 - Aug 2020 (7 years 4 months)
I provide middle-ware integration and support for Fujitsu Web Hosting at Honeywell. I work with Apache, Websphere, Jboss, Tomcat, IIS, SSL Certificates - Mostly on Unix (Linux and AIX). I have been on this Honeywell Account since 2001 through different contracting Companies (IBM and Fujitsu)

Middleware Integrator (unix)
IBM
Jan 2002 - Aug 2020 (18 years 8 months)
Contractor from 2002 to 2020 (IBM, FUJITSU, CAPGEMINI) Hired Full Time in 2020

Software Integration Team Lead
American Express
Jan 2000 - Jul 2002 (2 years 7 months)

Certified Banyan Engineer / MSCE
Advanced Network Applications (ANA)
Aug 1995 - Jan 2000 (4 years 6 months)
Served as a CBE and MSCE that managed 12 large Customer Banyan Installations in Arizona. Network Design, Break/Fix, Network Sniffer analysis.

Focal point in Server Migration from Banyan to Microsoft Application Servers.

Small Systems/LAN Specialist MOS: 4034 / 4066
Marine Corps Recruiting
May 1990 - May 1994 (4 years 1 month)
Served as Marine Corps Base Small Systems Specialist, specializing in Banyan Networks. Responsible for configuring and maintaining Banyan Server Hardware. Received a Navy Achievement Medal (NAM) for redesign of network backbone infrastructure.

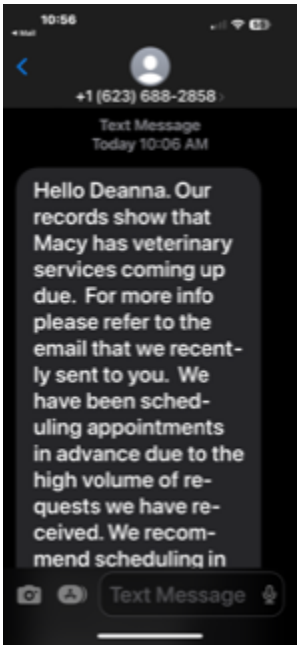
Skills
Unix • Integration • Bash • Requirements Analysis • Security • Software Engineering • Java Enterprise Edition • SQL • Reverse Engineering • C++

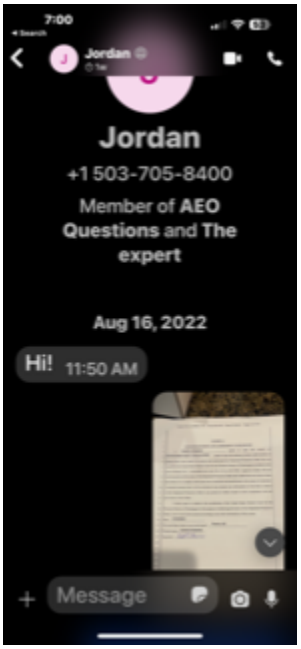
EXHIBIT B
FILED UNDER SEAL

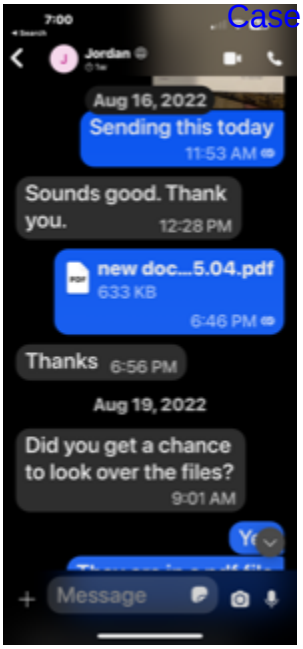
EXHIBIT C

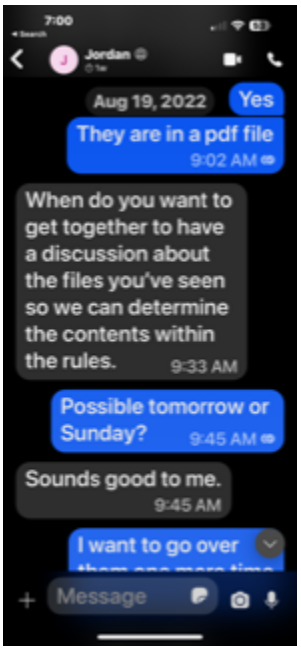
Signal-chat

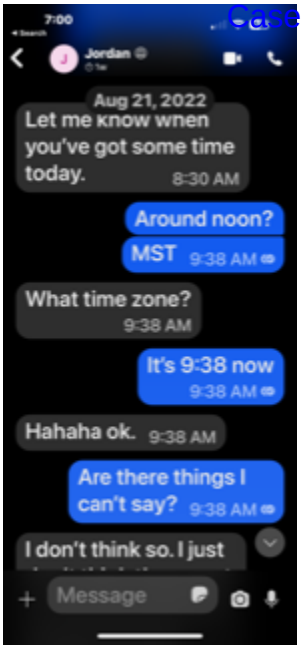
scott scottkraemer.com <scott@scottkraemer.com>
Fri 6/9/2023 12:12 PM
To:scott scottkraemer.com <scott@scottkraemer.com>

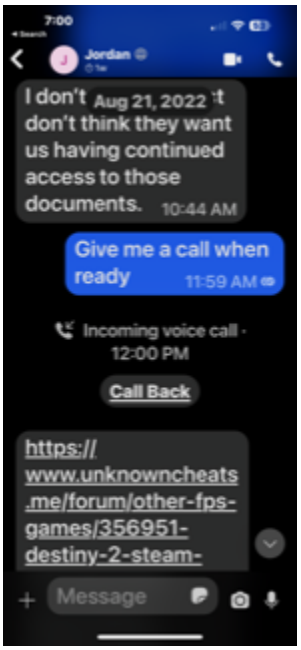


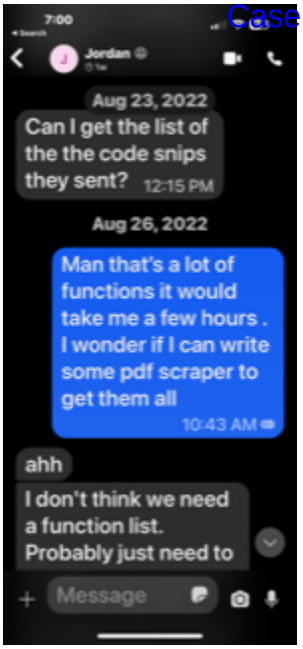



7:00
Jordan
Aug 16, 2022
Sending this today
11:53 AM
Sounds good. Thank you.
12:28 PM
new doc...5.04.pdf
633 KB
6:46 PM
Thanks
6:56 PM
Aug 19, 2022
Did you get a chance to look over the files?
9:01 AM
Message


7:00
Jordan
Aug 19, 2022
Yes
They are in a pdf file
9:02 AM
When do you want to get together to have a discussion about the files you've seen so we can determine the contents within the rules.
9:33 AM
Possible tomorrow or Sunday?
9:45 AM
Sounds good to me.
9:45 AM
I want to go over
Message


7:00
Jordan
Aug 21, 2022
Let me know when you've got some time today. 8:30 AM
Around noon?
MST 9:38 AM
What time zone? 9:38 AM
It's 9:38 now 9:38 AM
Hahaha ok. 9:38 AM
Are there things I can't say? 9:38 AM
I don't think so. I just
Message


7:00
Jordan
I don't Aug 21, 2022 t don't think they want us having continued access to those documents. 10:44 AM
Give me a call when ready 11:59 AM
Incoming voice call · 12:00 PM
Call Back
https://www.unknowncheats.me/forum/other-fps-games/356951-destiny-2-steam-
Message


7:00
Jordan
Aug 23, 2022
Can I get the list of the the code snips they sent? 12:15 PM
Aug 26, 2022
Man that's a lot of functions it would take me a few hours . I wonder if I can write some pdf scraper to get them all
10:43 AM
ahh
I don't think we need a function list. Probably just need to
Message

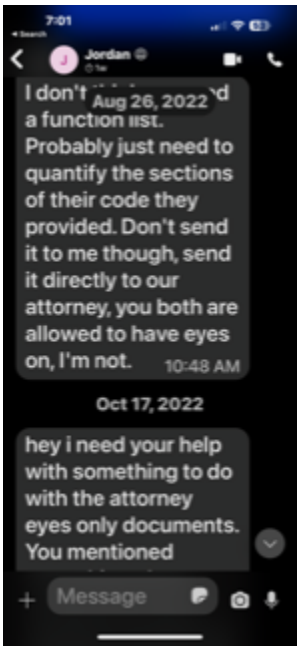

7:01
Jordan
Aug 26, 2022
a function list.
Probably just need to quantify the sections of their code they provided. Don't send it to me though, send it directly to our attorney, you both are allowed to have eyes on, I'm not. 10:48 AM
Oct 17, 2022
hey i need your help with something to do with the attorney eyes only documents. You mentioned
Message

EXHIBIT D

Expert Report of Scott A. Kraemer

9793 W. Hedge Hog PL, Peoria AZ 85383.

Background and introduction

On or about April 1, 2023[date], I was engaged by Defendants Phoenix Digital Group LLC ("Phoenix Digital") and James May ("Mr. May") to examine and opine on issues with regard to the matter styled Bungie, Inc. v. AIMJUNKIES.COM, et al, W.D. WA case no. 2:21-cv-811-TSZ. Specifically, I was asked to review documents and potentially write one or more reports and/or declarations and to testify as an expert witness in this action with regard to the Counter Claims made by Phoenix Digital and Mr. May in this matter concerning (1) whether forensic evidence appears to support the conclusion that Plaintiff Bungie, Inc. ("Bungie") reverse engineered, de-compiled and/or otherwise analyzed a certain "loader" software product distributed by Phoenix Digital; and (2) whether Bungie appears from the evidence I reviewed to have accessed certain private files on the computer of Mr. May.

My background with respect to the matters at hand

My name is Scott A. Kraemer and I have been asked to write a report discussing some of the issues involved in this matter. Specifically, within the limits of available time and information, I have been asked to provide opinions related to actions apparently taken by Bungie in the course of investigating Phoenix Digital and James May, and whether such actions violate the Terms of Service of Phoenix Digital and/or Bungie. I specifically have been asked to review and analyze certain documents produced by Bungie and opine as to what those documents reflect and whether those documents suggest that Bungie engaged in such activities as reverse engineering, decompiling or otherwise improperly accessing the technology at issue in this case.

My experience dates back to 1990 when I entered the United States Marine Corps and received training to become Small Systems Specialist. I began C++ coding during this time. I exited the Marine Corps and became a Certified Banyan Engineer, and later a Microsoft Certified Engineer and have been in the Information Technology field for 25+ years under fortune 500 companies. I began reverse engineering as a hobby that turned into a website for reverse engineering online video gamesfor 8 years. I am extremely familiar with decompiling, attaching debuggers, and memory

editing programs that give video game players advantages in games. I retired from programming and reverse engineering in late 2017.

The Relevant Issues

My understanding of the relevant issues is based on my review of the Amended Counterclaims filed in this action on November 21, 2022, and related documents.

My understanding is that Defendant James May has asserted counterclaims alleging that Bungie, without his knowledge, authorization, or permission, accessed certain files on his personal computer in violation of various laws.

My further understanding is that Defendant Phoenix Digital has asserted a counterclaim alleging that Bungie violated Phoenix Digital's Terms of Service by reverse engineering and otherwise analyzing Phoenix Digital's "loader" software in violation of those Terms of Service.

I have been asked to render an opinion as to whether documents provided, and admissions made, by Bungie tend to show that (1) Bungie accessed Mr. May's personal computer files in excess of the authority granted to Bungie by Mr. May, and (2) Bungie acessed Phoenix Digital's "loader" software beyond any authority granted by Phoenix Digital's Terms of Service.

Summary of my conclusions.

Based on my review of certain documents (to be described in detail below) produced in this matter by Bungie, it is my conclusion and opinion that:

1. These documents, and in particular Bungie production documents BUNGIE_WDWA_0000410, BUNGIE_WDWA_0000416, BUNGIE_WDWA_0000421 and BUNGIE_WDWA_0000368, show that Bungie reverse engineered the AimJunkies' Cheat Loader and process flow, dumped crucial proprietary information on how the AimJunkies Cheat Loader and cheat injector work, and accessed the methods and IP addresses of the AimJunkies servers, all in violation of the plain meaning of the applicable Terms of Service put in place by Defendant Phoenix Digital Group LLC.. The Expert Report from Steven Guris lists in detail how he reverse engineered AimJunkies' Cheat Loader on Page 26-30 with images of the loader decompiled.

2. The Expert Witness Report from Steven Guris lists in detail how he reversed engineered the AimJunkies Cheat Loader on Page 26-30 with images of the loader decompiled and gave analysis of his findings.

3. These documents, including but not limited to Bungie production document BUNGIE_WDWA_

0000409, show that Bungie accessed Mr. May's computer files beyond the scope authorized by the plain language of Bungie's Limited Software License Agreement and Privacy Policy. In particular, it is my opinion that these documents produced by Bungie in this action relating to Bungies "Findings of James Mays Files," show that the category "GameCheats.AimJunkies binary found" was accessed outside the games own directory by a process other than the code-script entitled "Reverse Engineer Tool Attached," and beyond the scope of the authorization granted by Mr. May.

Documents reviewed and relied upon

In the course of forming my opinions, I was provided with and reviewed the following documents provided to me by counsel for the Defendants in this matter:

BUNGIE_WDWA_0000002 "Highly Confidential".pdf (Bungie of sample Source Code of x number of functions.)

BUNGIE_WDWA_0000251 "Highly Confidential".pdf (Bungie of sample Source Code of x number of functions.)BUNGIE_WDWA_0000368 "Highly Confidential".pdf (Appears to be a dump of notepad.exe with strings, section data, and encrypted data.)

BUNGIE_WDWA_0000409.XLSX (James May Data.)

BUNGIE_WDWA_0000410 "Highly Confidential).pdf AimJunkies Cheat Analysis Document

BUNGIE_WDWA_0000412_Highly Confidential – Attorney Eyes' Only (CSV process Dump of notepad.exe.)

BUNGIE_WDWA_0000483.pdf Weekly Game Security Report - 17th January 2020

BUNGIE_WDWA_0000488.pdf Weekly Game Security Report - 24th January 2020

BUNGIE_WDWA_0000493.pdf Game Security Report - 11/18/19 - 1/10-20

BUNGIE_WDWA_0000497.pdf Game Security Report week of 11/4/2019

BUNGIE_WDWA_0000518.pdf Emails relating to RE: Destiny Game Security Advisors Weekly Sync - June 29th, 2020

BUNGIE_WDWA_0000522.pdf Emails relating to RE: Destiny Game Security Advisors Weekly Sync - June 29th, 2020

BUNGIE_WDWA_0000525.pdf Emails relating to RE: Destiny Game Security Advisors Weekly Sync - June 29th, 2020

BUNGIE_WDWA_0000528.pdf Emails relating to RE: Destiny Game Security Advisors Weekly Sync - June 29th, 2020

BUNGIE_WDWA_0000536.pdf Emails relating to Game Security Report week of 10/21/2019 - Useless

BUNGIE_WDWA_0000551.pdf Weekly Game Security Report - 24th January 2020

BUNGIE_WDWA_0000552.pdf Weekly Game Security Report - 24th January 2020

BUNGIE_WDWA_0000597.pdf

Bungie Limited Software License Agreement dated March 6, 2020.

Bungie Privacy Policy dated January 21, 2020.

Phoenix (AimJunkies) Terms of Service

Amended Answer and Counterclaims dated November 21, 2022.

Expert Report of Steven Giuris.

Exhibits A, B, C and D to the Amended Counterclaim filed November 21, 2022.

Basis and reasons for my opinions

I am basing my opinion solely on the contents of the documents provided and my knowledge as to what these documents reasonably demonstrate, show and mean from a technical standpoint.

With respect to certain of the documents Bungie has provided in this matter, my conclusions and basis for my conclusions are as set out below:

BUNGIE_WDWA_0000368. This document appears to be a memory dump of notepad.exe. The only way to obtain such document is to attach a tool or debugger to dump the contents of it. As this is a document prepared and produced by Bungie, it is apparent that Bungie, or someone operating on Bungie's behalf, attached the tool or debugger.

BUNGIE_WDWA_0000410. This document discusses obtaining the cheat metholdology, and how to initiate setting up the cheat loader. This document also specifies attempts to detect it, as made apparent in part from the quote below:

"Stage 1: The clear sign would be the IP connections 172.67.73.48 and 104.26.1.138. To

establish these https connections the cheat loader first injects itself into notepad.exe".

This sentence gives the IP addresses of where the cheat communicates with (Aim Junkies Servers). To get these IP addresses either a tool for monitoring network traffic from a PC using the AimJunkies Cheat Loader and subsequent Notepad process must have been used or the Cheat Loader/or Notepad was decompiled. This information is not freely available to keep DDOS attacks down.

BUNGIE_WDWA_0000412. This document shows that Bungie attached "Process Monitor" by SysInternals to the notepad process to monitor its Process and Thread activity and dumped the activity to a csv file. While not very useful, this is an attempt to find out what AimJunkies Cheat is doing.

Counterclaim #2

MD5 Hash.

You will see Bungie used a MD5 Hash on all of the James Files found. For Example in the Exhibit C Document

\??\g:\work files\reclass\x64\plugins\reclasskernel64.sys (8D98DB3A27112A9C92558FF90A1D6206)

g:\work files\reclass\x64\reclass.net.exe (360B1FE16603C1106CD8DEF992846B1B

The 32 length Numbers and Letters in Parenthesis is a MD5 Hash.

What is MD5?

MD5 (message-digest algorithm) is a cryptographic protocol used for authenticating messages as well as content verification and digital signatures. MD5 is based on a hash function that verifies that a file you sent matches the file received by the person you sent it to. Previously, MD5 was used for data encryption, but now it's used primarily for authentication.

How does MD5 work?

MD5 runs entire files through a mathematical hashing algorithm to generate a signature that can be matched with an original file. That way, a received file can be authenticated as matching the original file that was sent, ensuring that the right files are the unmodified originals.

It is my opinion that the technological evidence showed Bungie searched and found files and used a MD5 Hash Generator to access James Mays Files to Generate the Hash. The MD5 Tool/API they used read the full contents of the file to generate and produce the hash values.

System Drivers

The System Drivers found in Exhibit C Example \??\g:\work files\reclass\x64\plugins \reclasskernel64.sys (8D98DB3A27112A9C92558FF90A1D6206)

System Drivers are loaded into a computer system's Kernel and not attached to the game. The Drivers contain no cheat codes for Destiny 2 or any other cheat. These Drivers are Utility Tools used by Phoenix Digital Group. VirusTotal.com shows this file to contain no detected malware or being flagged for malicious content. This specific driver file was first submission to VirusTotal.com on

2022-03-08.

Exhibit D to Amended Counterclaims.

Bungie shows they found "(C:\Users\james\Desktop\ReClass.NET-KernelPlugin-master\bin \ReClassKernel64.pdb)." This file is a symbols / Debug file used when compiling ReClassKern64.sys. A system driver, would never be attached to the game, and was apparently located by other means undertaken by Bungie, which is not explained in Exhibit D or BUNGIE_WDWA_0000409.XLSX by column identification "AimJunkies binary found".

It is my opinion Bungie searched for and accessed these private files and system drivers outside of the Destiny 2 game directory structure and into personal space.

Exhibits
As I understand the various documents I have identified above, including those marked "Confidential" and "Highly Confidential" are already in the possession of Bungie and have previously been filed under seal with the Court, I am not listing those documents as exhibits here. I may, however, use those documents as exhibits if I am called upon to testify before the Court or Jury.

Qualifications and publications
A copy of my resume accompanies this report. I have not had any publications in the last ten years.

List of prior cases
None.

Compensation
I am being compensated by Defendants James May and Phoenix Digital at a rate of $75 per hour.

DocuSigned by:
Scott A. Kraemer
954A15DD9B19405...

Scott A Kraemer

June 12, 2023